

APPLICATION

FOR

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TITLE: Bobble Head Fluid Container

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Bobble Head Fluid Container

This application is related to a prior patent application, serial number 10/702,789 entitled, "Bobble Head Fluid Container" by the same inventor, that was filed on November 5, 2003 and to another patent application for a "Bobble Head and Container" that was filed on February 13, 2004.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

The present invention, in general, relates to fluid containers and, more particularly, to a fluid container for use with a straw that includes a bobble head.

A bobble head is a well known type of device that supports a simulated head atop a lower member (i.e., the rest of a body) to create a figurine, either human or otherwise. The typical bobble head includes a spring that is disposed intermediate the head and the lower member. The spring is attached at a lower end thereof to an upper part of the body and at an upper end thereof to the simulated head.

The spring suspends the simulated head above the body and allows the head to shake slightly up or down, tilt from side to side, forward and back, and even to rotate slightly about a center longitudinal axis (i.e., to turn from right to left). The head wobbles or "bobbles" in response to movements that are incurred by the head or by the body. The spring transfers energy (kinetic) between the body and the head so as to impart a range of motion to the head relative to the body that appears to bring a level of animation to the head. This increases both the realism and novelty of the figurine.

Figurines that include a bobble head are well known devices. They are sold for use both as toys and as novelty items. They are sometime even given away for free as a promotional item. For example, it is not uncommon to see a bobble head figurine that resembles that of a popular character commonly associated with a fast food restaurant atop a dashboard of an automobile. The bobbling of the head amuses the driver and the caricature itself reminds others of the particular restaurant, thereby serving an advertising function for the restaurant.

However, the utility of the bobble head figurine is limited. It is desirable to be able to hold a fluid for consumption in a container that includes a bobble head. This would help in marketing (advertising) as was mentioned above while making utilitarian use of the figurine.

The term "bobble head" is not limited to a representation of a head only but can include any structure of interest, for example, a football, baseball, basketball, soccer ball, tennis ball, ping pong ball, pumpkin, Christmas decoration or tree, cartoon caricature, animal, etc. The term bobble head is herein intended to include any type of an ornamental design that is supported by an upper half of a spring, the lower half being attached to a base portion, and which can tilt with respect to a center vertical axis in any direction along a 360 degree arc extending radially around the center vertical axis.

Accordingly, there exists today a need for a bobble head fluid container that is adapted to hold a fluid.

Clearly, such an apparatus would be a useful and desirable device.

2. Description of Prior Art:

Bobble head devices as well as drinking containers are, in general, known but not together. For example, the following patents describe various types of these devices:

U.S. Patent No. 2,893,591 to Barradas, July 7, 1959;

U.S. Patent No. 4,815,999 to Ayon et al., March 28, 1989;

U.S. Patent No. 4,816,000 to Hsu, March 28, 1989;

U.S. Patent No. 4,923,084 to Forbes, May 8, 1990;

U.S. Patent No. 5,162,013 to von Mohr, November 10, 1992;

U.S. Patent No. 5,277,646 to Fekete et al., January 11, 1994;

U.S. Patent No. 5,636,740 to Finkiewicz et al., June 10, 1997;

U.S. Patent No. 6,382,440 to Brant et al, May 7, 2002;

U.S. Patent No. 6,505,734 to Su, January 14, 2003;

U.S. Patent No. 6,511,359 to Lui, January 28, 2003; and

U.S. Design Patent No. 282,339 to Wei, January 28, 1986.

Also, U.S. Patent No. 6,494,056 to Roth, et al, that issued December 17, 2002, appertains to a thermal energy storing device that was used on an apparatus manufactured or marketed by Cool Gear International, Inc. Duxbury, MA 09332, telephone 1 800 386-3374 and covered by U.S. Design Patent 472,563 for a refreezable beverage cooler. This apparatus includes a container with a conduit extending through a head. The head is supported by a spring and can be urged up

or down longitudinally but the conduit prevents it from bobbling (i.e., having a full range of side to side tilting) as is characteristic of a true bobble head. It is also not possible to acquire any fluid from the container without having to tilt the container upside down. This causes the head to move longitudinally and strike the mouth of the person using the device, clearly an undesirable condition.

While the structural arrangements of the above described devices, at first appearance, may have similarities with the present invention, they differ in material respects. These differences, which will be described in more detail hereinafter, are essential for the effective use of the invention and which admit of the advantages that are not available with the prior devices.

OBJECTS AND SUMMARY OF THE INVENTION

It is an object of the present invention to provide a bobble head fluid container that is adapted to contain a fluid and which has a bobble head attached thereto.

It is also an important object of the invention to provide a bobble head fluid container that is economical to

manufacture and which is adapted to contain a fluid and which has a bobble head attached thereto and which is adapted to receive a straw through the bobble head that can contact the fluid when the container is oriented in a normal position, with the bobble head elevated above a bottom of the container.

Still another object of the invention is to provide a bobble head fluid container that is adapted to contain a fluid and which has a bobble head attached thereto and which is adapted to receive a straw through the bobble head that can contact the fluid when the container is oriented in a normal position, with the bobble head elevated above a bottom of the container and which permits withdrawal of the fluid by sucking it out through the straw while the container remains in the normal position.

Still yet another object of the invention is to provide a bobble head fluid container that is adapted to contain a fluid and which has a bobble head attached thereto and which can be refilled with an additional fluid.

A first further important object of the invention is to provide a bobble head fluid container that is adapted to

contain a fluid and which has a bobble head attached thereto and which includes a top that can be opened to add or drain the fluid from the container and which is adapted to receive a straw.

A second further important object of the invention is to provide a bobble head fluid container that is adapted to contain a fluid and which has a bobble head attached thereto and wherein the container is able to be separated into an upper and a lower portion sufficient to add or drain fluid from the lower portion of the container and which is adapted to receive a straw through the bobble head.

A third further important object of the invention is to provide a bobble head fluid container that is adapted to support a bobble head on a threaded lid that is hidden from view with a straw passing through the bobble head.

A fourth further important object of the invention is to provide a bobble head fluid container that is adapted to provide a container that includes a straw passing through the bobble head sufficient to contact a fluid in the container and wherein the bobble head is disposed above a threaded cap, and wherein the bobble head is adapted to be urged downward to engage with the cap sufficient to permit

loosening or tightening of cap according to the direction the bobble head is rotated.

A fifth further important object of the invention is to provide a bobble head fluid container that allows consumption of a fluid disposed in the container without having to dispose the container in an attitude other than normal (i.e., flat).

An sixth further important object of the invention is to provide a bobble head fluid container that includes a straw (conduit) that contacts a fluid disposed in the container when the container is disposed in a normal flat and level position.

A seventh further important object of the invention is to provide a bobble head fluid container that includes a straw (conduit) passing through a bobble head, the straw including a lower end that is placed within a fluid disposed in the container when the container is disposed in a normal flat and level position and which allows consumption of the fluid when a partial vacuum is created at an upper end of straw sufficient to draw the fluid up through the straw and into a mouth of a user.

Briefly, a bobble head fluid container that is constructed in accordance with the principles of the present invention has a container and a bobble head affixed to a top of the container. The container is adapted to contain a fluid for consumption by a human. A hole to insert a straw is provided through the bobble head. The container includes a lid under the bobble head or, according to a modification, is separable into two halves, an upper half and a lower half. When the container is separable the lower half serves as the container for the fluid. According to a preferred modification, the lid can be unscrewed and removed apart from the container if the bobble head is depressed sufficient to engage a plurality of teeth on the bobble head with a plurality of recesses on the lid.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of bobble head fluid container, shown partially in cross-section.

FIG. 2 is a side view of an alternate method of attaching a spring to a lid of the device of **FIG. 1**.

FIG. 3 is a side view of a modified bobble head fluid container, shown partially in cross-section.

FIG.s 4a, 4b, and 4c include views of a second modified bobble head container, shown partially in cross-section that includes a hex key shape.

DETAILED DESCRIPTION OF THE INVENTION

Referring to **FIG. 1** is shown, a bobble head fluid container, identified in general by the reference numeral 10.

The bobble head fluid container 10 includes a bobble head 12 and a fluid container 14. The example shown resembles a caricature of a well known cartoon mouse, although any appearance can be used. For example, the bobble head fluid container 10 may resemble a man, woman, child, infant, baby, animal, comic or cartoon character, movie character, monster, mythological creature, sports personality, etc.

Regardless of the appearance, the bobble head fluid container 10 will always include the bobble head 12 (in some form) and the fluid container 14 (in some form). The shape and size of the bobble head 12 and of the fluid container 14 will vary, as desired.

The bobble head 12 and the fluid container 14 of the bobble head fluid container 10 combine to produce an overall appearance of a figurine. The fluid container 14 is hollow and is adapted to contain a fluid 16 for human consumption. The fluid 16 is any preferred fluid in a liquid state, for example, milk, chocolate milk, soda, etc. While it is possible to use the bobble head fluid container 10 with a hot beverage, it is intended primarily for use when the fluid 16 is at or below room temperature (i.e., cooled).

The fluid container 14 includes a hole 18 that is adapted to receive a straw 20. The hole 18 provides an opening through the bobble head 12. The straw 20 is inserted through the hole 18 sufficient so that a lower end of the straw 20 makes contact with the fluid 16. Passage of the straw 20 through the bobble head 12 is described in greater detail hereinafter.

An upper end of the straw 20 is used to draw (i.e., to suck) the fluid 16 out of the fluid container 14 by creating a partial vacuum at the upper end of the straw 20 when the container 14 is disposed as shown, with the bobble head 12 on top above a base 14a of the container 14. This position is herein referred to as the normal position where the container 14 is disposed "right side up", as shown.

While it is generally preferred that the base 14a be able to secure the bobble head fluid container 10 in the normal position when it is placed on a flat surface, this is not required for use of the bobble head fluid container 10. Accordingly, for certain applications, the base 14a may include other than a flat shape.

A lid 22 is provided that includes interior threads that are adapted to cooperate with corresponding outer threads on top of the fluid container 14. This method of attachment is in general well known and is commonly referred to as a "screw-type of lid".

The lid 22 is provided for access to the interior of the fluid container 14 (i.e., to access an upper opening) and is used to fill the fluid container 14 with the fluid 16. The lid 22 can also be loosened (i.e., opened) to drain

any remaining quantity of the fluid 16 from the fluid container 14.

The lid 22 is unscrewed to either fill or drain the fluid container 14. This is described in greater detail hereinafter.

The lid 22 is circular and includes a tapered side 24. The tapered side 24 leads to a top of the lid 22 that includes a smaller diameter than a lower portion of the lid 22 that attaches to the fluid container 14.

Disposed around an outer circumference of the tapered side 24 are a plurality of alternating raised parallel ridges and depressions 26 (i.e., longitudinal protrusions and recesses) that each include a substantially vertical longitudinal axis thereof and which are disposed at an angle away from vertical that corresponds to the angle of the tapered side 24.

A lower end of a spring 28 is attached to the top of the lid 22. The lower end of the spring 28 is molded into the top of the lid 22 or is otherwise secured thereto.

A support member 30 (shown in cross-section) is structurally attached to the bobble head 12 and is capable of supporting the weight of the bobble head 12. The support member 30 may be molded into the bobble head 12 as an integral part thereof or it may be a separate component that is attached to the bobble head 12.

The support member 30 includes a recess 32. The recess 32 includes interior tapered sides 34 that generally match (i.e., correspond) with the tapered side 24 of the lid 22. The recess 32 is open at a bottom and is closed at a top. Accordingly, a cross-sectional view of the recess 32 includes a shape that approximates a frustum (i.e., a section) of a cone with a larger diameter at the bottom thereof.

An interior circumference of the tapered sides 34 include a plurality of alternating raised parallel ridges and depressions 36 (i.e., longitudinal protrusions and recesses) that are adapted to cooperate with the plurality of alternating raised parallel ridges and depressions 26 of the lid 22.

An upper end of the spring 28 is secured to the support member 30 by inserting it into a recess 38 that is provided in the support member 30.

The upper end of the spring 28 is retained by a friction fit with the recess 38 or it can be molded or attached in other ways, as described hereinafter for both the upper and lower ends thereof.

The spring 28 is sufficiently strong to retain the bobble head 12 in cooperation with the lid 22 and to support the bobble head 12 a small distance above the lid 22 whenever the bobble head 12 is not being urged otherwise by another force (i.e., by the hand of a user-not shown).

To open the lid 22 and gain access to the interior of the fluid container 14 for filling or draining of the fluid 16, a force is applied by a user in a downward direction as shown by arrow 40. The force must be of sufficient magnitude to compress the spring 28 and urge the bobble head 12 down toward the lid 22.

As the bobble head 12 is urged downward, the plurality of alternating raised parallel ridges and depressions 36 on the interior tapered sides 34 of the support member 30

cooperate and engage with the plurality of alternating raised parallel ridges and depressions 26 of the lid 22, much like the teeth on a pair of gears (not shown) mesh together when brought together (A small rotary movement of the bobble head 12 may be required for proper engagement).

While maintaining downward pressure on the bobble head 12, the bobble head 12 is then rotated in a counter-clockwise direction (looking down on the top of the fluid container 14) to unscrew, loosen, and remove the lid 22 apart from the fluid container 14.

The lid 22, spring 28, support member 30, and bobble head 12 are then removed apart from the fluid container 14 as an integral assembly.

The lid 22 covers the top opening into the fluid container 14. The opening can be used to add a quantity of the fluid 16 to an inside of the fluid container 14, refill the fluid container 14 with more of the fluid 16 (or a different type of fluid), or drain the remaining quantity of the fluid 16 from the fluid container 16.

The straw 20 passes through the hole 18 on top of the bobble head 12. It also passes through a second hole 18a in

the support member 30, passes through the center of the spring 28, and through a third hole 18b in the top of the lid 22 from which it extends downward through the container 14 sufficient to contact the fluid 16 in the container 14.

The hole 18, second hole 18a, and third hole 18b are proximate the center of the bobble head fluid container 10 and include a center longitudinal axis 44 that passes through the center of the spring 28. Accordingly, when the bobble head 12 is pushed down so that the lid 22 can be removed or tightened and when the bobble head 12 is urged up again by the spring 28, it moves along the center longitudinal axis 44 and it passes around the straw 20 without any need to displace or even remove the straw 20.

If the fluid 16 has been removed for cleaning purposes, the straw 20 is also removed by pulling it upward and out of the bobble head fluid container 10. Then the lid 22 is unscrewed and a detached assembly containing the lid 22, spring 28, support member 30, and bobble head 12 are either manually washed or are placed in a dishwasher for cleaning and subsequent reuse. Depending upon the quality of the straw 20 it may be discarded if it is of inferior quality or it too can be washed if it is of superior quality and is to be reused.

When the fluid container 16 is either initially filled or refilled with the fluid, the assembly (i.e., the lid 22, spring 28, support member 30, and bobble head 12) is placed atop the fluid container 14. The bobble head 12 is once again urged in the direction of the arrow 40 and is then rotated in a clockwise direction an amount sufficient to tighten the lid 22. Once the lid 22 is deemed to be sufficiently tight as is indicated by a sudden increase in resistance to its continued turning, the force along arrow 40 is removed. Once the force is removed, the spring 28 urges the bobble head 12 away from the lid 22.

A bottom end of the straw 20 is then inserted first through the hole 18, then the second hole 18a, and then through the third hole 18b until the bottom end of the straw 20 reaches the fluid 16. If the straw 20 is long enough, it can be pushed into the bobble head fluid container 10 until the bottom end of the straw 20 makes contact with an interior surface of the base 14a.

In the elevated position, the bobble head 12 can bobble with respect to the lid 22 (and the fluid container 14) as shown by second arrows 42. The space intermediate the interior tapered sides 34 of the support member 30 and the

spring limit the range of motion. The head 12 can bobble (i.e., tilt from side to side) in any direction along 360 degrees of arc rotation about the center longitudinal axis 44 of the spring 28. If the head 12 is twisted, it can also rotate a small amount as permitted by the spring 28 around the center longitudinal axis 44, which equates to a turning of the head 12 from right to left (side to side).

To provide clearance for the bobble head 12 to tilt from side to side (i.e., to bobble), the bottom of the bobble head 12 is provided with a large opening 46 that includes sufficient clearance intermediate the bottom of the bobble head 12 and the outside of the fluid container 14.

Referring momentarily to **FIG. 2**, an alternative method of attaching the lower end of the spring 28 to the top of the lid 22 and to the bobble head 12 is shown and it includes providing a first cylindrical extension 48 that is molded on top of the lid 22 and a second cylindrical extension 50 that is molded inside the bobble head 12 to the support member 30.

Each end of the spring 28 includes a diameter that is preferably slightly less than that of either cylindrical extensions 48, 50. Each end of the spring 28 is forced over

each extension 48, 50. The spring 28 ends expand slightly and apply a force to each extension 48, 50 sufficient to retain each end of the spring 28 in position by a friction fit. Additional holes are provided through each extension 48, 50 to accommodate passage of the straw 20.

Referring now to **FIG. 3** is shown a side view of a modified bobble head fluid container 100.

A modified fluid container 102 includes an upper half 104 and a lower half 106. The upper half 104 includes interior threads 108a that match with exterior threads 108b of the lower half 106.

The hole 18 is provided through a modified support member 110 and passes through the second hole 18a in the modified support member 110 and through the spring 28 interior.

The modified support member 110 does not require the plurality of alternating raised parallel ridges and depressions 36 of the support member 30 because a modified bobble head 12a is not removed for filling the modified fluid container 102.

The straw 20 passes through a fourth hole 18c that is provided in an upper portion of the upper half 104 and extends through the upper half 104 to the lower half 106 where the bottom end of the straw 20 makes contact with the fluid 16 that is disposed in the lower half 106.

The upper half 104 is unscrewed from the lower half 106 to fill or drain the lower half 106. An opening is provided at the top of the lower half 106 proximate (i.e., inside) the exterior threads 108b of the lower half 106.

The spring 28 is attached at the top to the modified support member 110. The spring 28 is attached at the bottom to an upper portion of the upper half 104 and extends around the fourth opening 18c.

To remove the upper half 104, the upper half 104 itself is grasped and is rotated counterclockwise with respect to the lower half 106 until it is free and separate. To tighten, the process is reversed.

The advantage to the modified bobble head fluid container 100 is that its bobble head 12a portion is somewhat more simple in construction than that of the bobble head fluid container 10. The disadvantage is that the lower

half 106 tends to provide a smaller capacity for the fluid 16. Also, the lid 22 is hidden when it is disposed under the bobble head 12, and this adds to the realism of the figurine.

Clearly, many modifications are possible. For example, wherever screw threads are used, a snap type of a modified lid or engagement can be used.

For either modification 10, 100, the bottom end of the straw is placed in the fluid 16. The bobble head fluid container 10 and the modified bobble head fluid container 100 are kept in the normal position during use, otherwise fluid would spill out similar to when a glass (not shown) is excessively tilted or held upside down.

While in the normal position, when the fluid container 14 (or the lower half 106 of the modified fluid container 102) includes the fluid 16, a partial vacuum created by sucking on the opposite upper end of the straw 20 draws the fluid 16 up through the straw 20, out through the bobble head 12 (or the modified bobble head 12a) and into the mouth of the user.

It is important to note that the fluid container 14 and the modified fluid container 102 remain in a level attitude with respect to a ground surface while the fluid 16 is being drawn up through the straw 20 for consumption.

This provides a significant benefit in that the bobble head 12 (or bobble head portion of the modified fluid container 102) cannot strike the mouth of the user. This makes the apparatus safer to use and more friendly because it cannot cause a sudden jolt to the user.

Referring now to **FIG.s 4a, 4b, and 4c** is shown a second modified bobble head container, identified in general by the reference numeral 300. The second modified bobble head container 300 includes a second modified container top 302 that includes a hex shape key 304 on top. Any shape can, of course, be used.

A second modified bobble head, identified by the reference numeral 306 is similar to that previously described and it includes a hex key recess 308 that is adapted to fit over the hex shape key 304 when the second modified bobble head 306 is pressed down, in a manner similar to that as was previously described. The second modified bobble head 306 is then rotated to loosen or

tighten the second modified container top 302, which is secured by threads to the second modified bobble head container 300.

Preferably, the second modified bobble head 306 includes a decorative top 310 that is selected from one of many possible similar decorative tops, each one having a different ornamental appearance. A second modified support member 312 that includes the hex key recess 30, includes a circular ridge 314 that can accept any style of the decorative top 310. This allows widespread use of the second modified support member 312. This enhancement (use of the ridge 314) is also applicable for use with any of the embodiments previously described.

A straw hole 316 is provided in the second modified support member 312 and also through the second modified container top 302 through which the straw 20 passes.

The invention has been shown, described, and illustrated in substantial detail with reference to the presently preferred embodiment. It will be understood by those skilled in this art that other and further changes and modifications may be made without departing from the spirit

and scope of the invention which is defined by the claims appended hereto.

What is claimed is: